

**Invitation for Public Comment on the List of Candidates for the  
EPA Science Advisory Board Environmental Engineering Committee**

**June 18, 2013**

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a Federal Register Notice on April 12, 2013 (78 FR 21946-21948) that it was inviting nominations of experts to be considered for the Administrator's appointment to the SAB Environmental Engineering Committee. The SAB Environmental Engineering Committee provides advice to the EPA Administrator, through the chartered SAB, on risk management technologies to control and prevent pollution. For the Environmental Engineering Committee, the SAB Staff office sought nominations of experts within the disciplines of geochemistry; hazardous and solid waste management; and wastewater treatment.

The SAB Staff Office identified 19 candidates based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates for consideration by the SAB Staff Office. Comments should be submitted to Mr. Edward Hanlon, Designated Federal officer no later than July 18, 2013 at [hanlon.edward@epa.gov](mailto:hanlon.edward@epa.gov). E-mail is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

## **Aitken, Michael D.**

### **University of North Carolina**

Dr. Michael D. Aitken is Professor and Chair of the Department of Environmental Sciences and Engineering in the Gillings School of Global Public Health, University of North Carolina at Chapel Hill (UNC-CH). He has a B.S. in Civil Engineering from the University at Buffalo (1978), M.S. in Civil Engineering from The University of California - Davis (1980) and Ph.D. in Civil Engineering from the University of Notre Dame (1988), with specialization in environmental engineering for each degree. His primary expertise is in the development and application of microbial processes to the biodegradation of organic pollutants and to waste treatment problems. His recent research has combined engineering analysis with advanced molecular biological tools to identify and evaluate the microorganisms responsible for the biodegradation of hazardous chemicals in contaminated environmental systems, to elucidate and improve the bioavailability of hydrophobic organic compounds in contaminated soil, and to evaluate the impact of bioremediation strategies on residual toxicity and genotoxicity of treated soils. He also has ongoing research on nitrogen removal from swine waste, and has conducted research on the inactivation of microbial pathogens during the treatment of sludge derived from municipal wastewater. His research has been supported by public sources at the federal, state, and local levels, as well as private sources; these include the National Institute of Environmental Health Sciences (NIEHS), the National Science Foundation, the U.S. Geological Survey, the U.S. Environmental Protection Agency, the Water Environment Research Foundation (WERF), the University of North Carolina Water Resources Research Institute, and private industries (Ciba-Geigy, Hoechst Celanese, Novo Nordisk, Occidental Chemical, and Union Carbide). His current and recent research has been supported primarily by NIEHS under its Superfund Research Program, by Carolina Public Health Solutions (internal to UNC-CH) and a recent small grant from the Energy Services Department at UNC-CH. Dr. Aitken has served as the director of the environmental engineering program at UNC-CH, on the WERF Research Council, on the Science Advisory Board of the EPA-supported Midwest Hazardous Substance Research Center, and on the Board of Directors of the Association of Environmental Engineering and Science Professors (including service as President in 2002), and he is currently on the Executive Committee of the Research Triangle Environmental Health Collaborative. He is a Board Certified Member of the American Academy of Environmental Engineers and Scientists.

## **Barlaz, Morton A.**

### **North Carolina State University**

Dr. Morton A. Barlaz is Professor and Head of the Department of Civil, Construction, and Environmental Engineering at North Carolina State University. He received a B.S. in Chemical Engineering from the University of Michigan and an M.S. and Ph.D. in Civil and Environmental Engineering from the University of Wisconsin. Dr. Barlaz has been involved in research on various aspects of solid waste since 1983. Over this time, he has conducted research on biological refuse decomposition, methane production, the biodegradation of hazardous wastes in landfills and policies for the long-term management of landfills after closure. Dr. Barlaz has participated in two state-of-the-practice reviews of bioreactor landfills. His research forms the basis for much of the work done to assess the impact of landfills on methane emissions inventories. Dr. Barlaz is also recognized for his research on the use of life-cycle analysis to evaluate environmental emissions associated with alternate solid waste management strategies. He is the author of over 100 peer-reviewed publications and has made over 200 presentations at conferences throughout the world. In 1992 he was awarded a Presidential Faculty Fellowship from the National Science Foundation. Dr. Barlaz has served as an Associate Editor for two journals (Waste Management and Journal of Environmental Engineering) and as co-chair of the bi-annual Intercontinental Landfill Research Symposium for twelve years. He has served as chair of the Government Affairs Committee and the Lectures Committee for the Association of Environmental Engineering and Science Professors. Finally, Dr. Barlaz serves on the Science Advisory Committee for the International Waste Working Group. His recent research has been supported by the National Science Foundation, the EPA, the Environmental Research and Education Foundation, Waste Management and the Plastics Environmental Council.

## Casey, William H.

### University of California, Davis

Dr. William H. Casey is a Professor in the Departments of Chemistry and Geology at the University of California, Davis, and is an expert in aqueous solution chemistry. He has over 200 scientific publications on subjects ranging from acid mine drainage to molecular-dynamics of nanometer-sized materials in water. Dr. Casey holds a Ph.D. in Geochemistry and Mineralogy from the Pennsylvania State University, his M.S. from the University of California in Geology, and a B.S. in Geology from the University of the Pacific. He has been a member of the UC faculty for over 22 years and previously held a research scientist position at Sandia National Laboratories. Dr. Casey is a Fellow of the Geochemical Society, and received the inaugural Werner Stumm Medal from the European Association of Geochemistry. He is also a member of the American Association for the Advancement of Science and the American Geophysical Union. Funding for Dr. Casey's research comes from the U.S. Department of Energy, the National Science Foundation, and the National Aeronautics and Space Administration. He has received no funding from the U.S. Environmental Protection Agency but serves on the Advisory Board for the American Chemical Society/Petroleum Research Fund. He has served as an officer in the Geochemical Society.

## Chin, Yu-Ping

### The Ohio State University

Dr. Yu-Ping Chin is Professor of Earth Sciences at The Ohio State University. Dr. Chin received his A.B in Geology from Columbia University, and his M.S. and Ph.D. in Environmental Engineering (Aquatic Chemistry specialization) from the University of Michigan. Prior to joining The Ohio State University, Dr. Chin conducted research as a postdoctoral associate at the Ralph M. Parsons Laboratory at the Massachusetts Institute of Technology. His research focuses on the role of dissolved organic matter (DOM) in mediating reactions of environmental and biogeochemical interest. These include metal and hydrophobic organic contaminant speciation, photochemistry and oxidation-reduction processes involving pesticides, pharmaceuticals and other emerging contaminants, and understanding the composition of DOM. Dr. Chin has also recently conducted research on soil sorption and plant uptake/depuration of animal hormones and their synthetic mimics. He is a current member of the National Research Council (NRC) Water Science and Technology Board and has served on two NRC study committees as well as more than a dozen National Science Foundation proposal review panels. Dr. Chin has published 78 peer-reviewed journal papers and is currently or has been the associate editor of Journal of Contaminant Hydrology, Aquatic Sciences, and Water Resources Research. Dr. Chin's research is predominantly supported by the National Science Foundation and the National Oceanic and Atmospheric Administration, along with additional funding from the U.S. Environmental Protection Agency, the U.S. Department of Agriculture, the U.S. Department of Defense, and the Ohio Water Development Authority. He has also been a visiting professor at the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) in Duebendorf, Switzerland and at the University of Otago (Chemistry Department) in Dunedin, New Zealand.

## Garvey, Edward

### Louis Berger Group

Dr. Edward Garvey is a Technical Vice President with the Louis Berger Group in Morristown, NJ, providing technical direction for the contaminated sediments and hazardous waste efforts of the firm nationwide. He is an environmental geochemist and a licensed professional geologist (PA), with extensive experience in geochemical investigative techniques, environmental forensics, and Superfund Megasite investigations. Dr. Garvey holds a B.Ch.E (Cooper Union) in Chemical Engineering and M.A., M.Phil. and Ph.D. degrees in Geological Sciences from Columbia University. His research interests include the integration of geochemical and geophysical data to establish sediment and contaminant transport, the geochemical study of persistent organic pollutants (POPs) such as PAHs, PCBs and dioxins and the geochemical study of heavy metals, such as lead and mercury. He has extensive experience in the application of environmental forensics by combining sediment core dating and other geochemical study techniques with high resolution analytical techniques to identify current and historical contaminant sources to the environment. Among his accomplishments are the technical direction of the U.S. Environmental Protection Agency's (USEPA) investigation and remedial decision for the Hudson River PCB superfund site (PCBs), the USEPA investigations of the Lower Passaic River and Newark Bay (NJ) Superfund sites (dioxins, PCBs, PAHs and heavy metals), the Onondaga Lake Superfund site for the NYSDEC (mercury and PCBs) as well as the successful investigations of numerous smaller sites throughout the US. He is currently providing technical direction for New York City's investigation efforts in the Gowanus Canal and Newton Creek, NYC (PAHs, PCBs and heavy metals) pertaining to combined sewer overflow discharges. He has coauthored over sixty-five presentations and journal articles on contaminant fate and transport. Dr. Garvey served for five years (2002 to 2007) on the New York Academy of Sciences NY/NJ Harbor Consortium, a panel convened by the academy at the request of USEPA to review contaminant issues for New York Harbor. Dr. Garvey is a member of the board of the directors for the Hudson-Delaware chapter of Society of Environmental Toxicology and Chemistry (2011 to present). He is also an adjunct professor in the Civil and Environmental Engineering Department at Manhattan College in the City of New York. His research has been conducted as part of his work as a consultant to the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, the State of New York, the City of New York and others, with the largest fraction from the USEPA. Dr. Garvey currently has no federal research funding.

## Gobler, Christopher

### Stony Brook University

Dr. Christopher Gobler is a Professor within the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University. He received his M.S. and Ph.D. from Stony Brook University in the 1990s. Dr. Gobler began his academic career at Long Island University (LIU) where he was promoted with tenure and became the director of the marine sciences program. In 2005, he joined Stony Brook University as the Director of Programs for SoMAS on the Stony Brook – Southampton campus. Dr. Gobler's research examines the functioning of aquatic ecosystems and how that functioning can be effected by man or can affect man. He investigates harmful algal blooms (HABs) caused by multiple classes of phytoplankton (cyanobacteria, dinoflagellates, diatoms, pelagophytes) in diverse ecosystems (e.g., estuaries, lakes, coastal ocean) using a diversity of methods (field, laboratory, experimental, molecular). Another research focus within Dr. Gobler's group is climate change effects on coastal ecosystems including studies investigating how future and current coastal ocean acidification effects the survival and performance of early life stage bivalves and fish. A final area of interest is investigating how anthropogenic activities such as eutrophication and the over-harvesting of fisheries alters the natural biogeochemical and/or ecological functioning of coastal ecosystems. Dr. Gobler's research has been supported by grants from and contracts with both government agencies and private companies, with core research support primarily being from the federal government (National Oceanic and Atmospheric Administration (NOAA), the National Science Foundation, and the U.S. Environmental Protection Agency), with additional support from the State of New York and from the New Tamarind Foundation. He has published more than 100 peer-reviewed papers on these topics and has mentored more than 25 graduate students in his lab group. He is two-term (2008-2014; term limit) elected member of the National Harmful Algal Bloom Committee (NHC) commissioned by US Harmful Algal Bloom and Hypoxia Research and Control Act and has served on several committees within the NHC. Dr. Gobler is on the Editorial Board of the journal, *Frontiers in Aquatic Microbiology*, and the journal, *Harmful Algae*. He has provided Congressional testimony to the U.S. House of Representatives' Subcommittee on Water Resources and Environment and has received numerous awards for his research and the usefulness of his science in shaping policy including the Bay Guardian Award (WaterKeeper's Alliance), the Environmental Equinox Award (Citizen's Campaign for the Environment), and the Trustee's Award for Scholarly Achievement (Long Island University).

**Johannesson, Karen****Tulane University**

Dr. Karen Johannesson is a Professor of Geochemistry and Chemical Hydrogeology in the Department of Earth and Environmental Sciences at Tulane University in New Orleans, Louisiana. She received her B.S. degree in Geology from the University of New Hampshire, where she graduated magna cum laude and was elected to Phi Beta Kappa, her M.S. degree in Geology and Geophysics from Boston College, and her Ph.D. in Hydrology/Hydrogeology from the University of Nevada in Reno. Prior to joining Tulane University in 2007, Dr. Johannesson was on the faculty at The University of Texas at Arlington within the Department of Earth and Environmental Sciences, and the Department of Ocean, Earth, and Atmospheric Sciences at Old Dominion University in Norfolk, Virginia. She has served as an Associate Editor of the premier scientific journal in the field of geochemistry, *Geochimica et Cosmochimica Acta*, since 2005, and is a fellow of the Geological Society of America. Dr. Johannesson's research interests broadly encompass environmental geochemistry and biogeochemistry with emphasis in trace element speciation, chemical hydrogeology, and the biogeochemical cycling of trace elements in the environment. Specifically, she focuses on the study of metal/metalloid aqueous complexes with inorganic and organic ligands, redox speciation, studies of surface complexation of metals/metalloids to mineral/organic matter surfaces, and the manner in which these processes effect trace element cycles in the environment. Dr. Johannesson has authored over 70 peer-reviewed scientific publications in leading scientific journals and books, and served as the editor for the book *Rare Earth Elements in Groundwater Flow Systems* (Springer, 2005). Her research has been supported by numerous grants from the U.S. National Sciences Foundation, specifically via grants from the Hydrologic Sciences Program, Chemical Oceanography Program, and through the Science, Engineering and Education for Sustainability NSF-wide Investment Program.

**Johnson, William P.****University of Utah**

Dr. William P. Johnson is a Full Professor in the Departments of Geology & Geophysics and Civil & Environmental Engineering (adjunct) at the University of Utah. His B.A. and M.S. degrees in Geology & Earth Science are from Whitman College and Dartmouth College, respectively. His Ph.D. degree in Civil Engineering is from the University of Colorado. Prior to joining the faculty at the University of Utah, he performed post-doctoral research (1.5 years) in the Departments of Chemical Engineering and Hydrology & Water Resources at the University of Arizona. His research focuses on fate and transport of particles and solutes in subsurface and aquatic systems, including organic, inorganic and biological components. Dr. Johnson has served/serves on review panels for multiple programs within the Engineering and Earth Sciences Directorates of the National Science Foundation, including Chemical, Biological and Engineered Transport Systems, Hydrologic Sciences, and the Center for Environmental Implications of Nanotechnology. Dr. Johnson's research funding is derived from a combination of federal and local sources. Primary federal sources include the National Science Foundation, whereas primary local sources include the Department of Environmental Quality of the State of Utah, and the Jordan River-Great Salt Lake Water Quality Council. Dr. Johnson has directed more than ten full research projects, with more than eighty peer-reviewed publications, six Ph.D. completions, and twenty M.S. completions.

## **Karanfil, Tanju**

### **Clemson University**

Dr. Tanju Karanfil is a Professor and the Chair of the Department of Environmental Engineering and Earth Sciences at Clemson University. He is also a registered professional engineer in State of South Carolina, and a Board Certified Environment Engineer by American Academy of Environmental Engineers. Professor Karanfil received his bachelor degree in Environmental Engineering from Istanbul Technical University in Turkey in 1988. He completed his graduate work (M.Sc., 1991, Ph.D., 1995, Post-doc., 1996) at the University of Michigan in Environmental Engineering under the supervision of Prof. Walter J. Weber, Jr., a member of National Academy of Engineering. Professor Karanfil's research interests are in the fundamentals and applications of physicochemical processes in natural and engineered water, wastewater and hazardous treatment systems including sorption and phase separation processes, disinfection/oxidation and disinfection by-product formation, advanced oxidation, fate and applications of nanomaterials and environmental sustainability. He has published his findings in the premier journals of his field, Environmental Science and Technology, Carbon, Water Research, Journal of Colloid and Interface Sciences, and Journal of American Water Works Association. He has produced more than 80 peer-reviewed publications with an h index of 25 and over 200 other technical presentations, reports, extended abstracts, and publications. He co-edited and published a book on DBPs entitled "Occurrence, Formation, Health Effects and Control of Disinfection By-Products in Drinking Water." His research has been supported by several grants from National Science Foundation (NSF), US Environmental Protection Agency, Department of Energy, and Water Research Foundation and with some additional support from water and wastewater utilities in South Carolina. He has also served as a project advisory committee member in several Water Research Foundation research projects and a technical advisor in a major hazardous waste management project in Turkey for the past five years. His research has created over \$7M of funding. Professor Karanfil is a recipient of NSF CAREER award. He has received several awards (e.g., McQueen Quattlebaum Faculty Achievement Award, Board of Trustees Award for Faculty Excellence) at Clemson University. He has mentored more than 80 graduate students, postdoctoral research associates and international visiting scholars. The results of his students' research have been recognized with best Ph.D. thesis, best M.Sc. thesis, best paper, and best graduate student awards by American Water Works Association, Water Environment Federation and American Chemical Society. He serves in the Editorial Advisory Board of the Journal of American Water Works Association.

## **Lohmann, Rainer**

### **University of Rhode Island**

Dr. Rainer Lohmann joined the University of Rhode Island's Graduate School of Oceanography in 2004. He will be Full Professor of Oceanography as of July 1, 2013. He received a degree in chemical engineering at the European Higher School of Chemistry in Strasbourg (France) in 1996, and Ph.D. in Environmental Science from Lancaster University, England, in 2000. Dr Lohmann currently serves as Editor for Environmental Toxicology and Chemistry and Clean - Air, Soil and Water, and is on the Editorial Board for Environmental Pollution, among others. He has been included in the Pool of Experts for the upcoming World Ocean Assessment organized by the UN EP. Dr. Lohmann has published over 70 peer-reviewed articles covering the atmospheric and marine fate of organic pollutants, the effect of geochemistry on the sorption and bioavailability of organic contaminants and the use of passive samplers in detecting various contaminants in air and water. Current research efforts cover the cycling of legacy and emerging organic pollutants in the Great Lakes, the Arctic and Antarctic and Superfund sites. Dr. Lohmann has been awarded national and international awards and fellowships for his contributions to environmental engineering and chemistry. His research has been supported by grants from and contracts with both government agencies and private companies, with core research support primarily being from the federal government (U.S. Environmental Protection Agency, and the National Science Foundation), with additional support from the Hudson River Foundation.



## Love, Nancy

### University of Michigan

Dr. Nancy Love is a Professor of Civil and Environmental Engineering at the University of Michigan (UM), where she served as Department Chair from 2008 – 2011. She recently served as an Associate Dean in the Rackham School of Graduate Studies at UM from 2011-2012. Prior to 2008, Dr. Love was on the faculty in the Department of Civil and Environmental Engineering at Virginia Tech. She holds B.S. and M.S. degrees in Civil Engineering (Environmental) from the University of Illinois, and a Ph.D. in Environmental Systems Engineering from Clemson University. After completing her M.S. degree, Dr. Love worked for approximately 3 years for CH2M Hill, Inc., primarily on the process design and pilot testing of drinking and wastewater treatment plants. Her research covers a range of interdisciplinary topics related to environmental biotechnology and water quality with an emphasis on the fate of trace organic chemicals and nutrients in wastewater treatment and resource recovery systems. Dr. Love has served on numerous committees associated with professional organizations (including national and international conference program committees for the International Water Association (IWA) and the Water Environment Federation (WEF)), was a member of EPA's Drinking Water Science Advisory Board, and was a gubernatorial appointee to the Scientific and Technical Advisory Committee (STAC) to the Chesapeake Executive Council. She has served in numerous leadership roles, including as President of the Association of Environmental Engineering and Science Professors, Chair of the Academic Committee for WEF, and Chair of an IWA Microbial Ecology and Water Engineering conference held in 2013. Dr. Love has published extensively, including 76 journal articles, over 200 conference papers and presentations, 2 book chapters, 8 published research reports, and she co-authored the 3rd Edition of Biological Wastewater Treatment with Grady, Daigger and Filipe. Her research has been supported by grants from government agencies (National Science Foundation), private companies (Carollo Engineers, Degremont), utilities (Hampton Roads Sanitation District, DC Water), and foundations (Water Environment Research Foundation, Water Reuse Foundation). Dr. Love is the recipient of a number of awards, including: the National Science Foundation Faculty Early Career Development (CAREER) Award; the Paul L. Busch Award for Innovation in Applied Water Quality Research; the Harrison Prescott Eddy Medal, the Rudolf's Industrial Waste Management Medal; and the Gordon Maskew Fair Distinguished Engineering Educator Award from the Water Environment Federation; and the Civil and Environmental Engineering (Virginia Tech) Alumni Teaching Excellence Award. She is Fellow of the Water Environment Federation, a Board Certified Environmental Engineer, and a registered professional engineering in Michigan.

## Lowry, Gregory V.

### Carnegie Mellon University

Dr. Gregory V. Lowry is a Professor of Environmental Engineering in the Department of Civil and Environmental Engineering at Carnegie Mellon University, Pittsburgh, PA. He is also Deputy Director of the NSF/EPA Center for Environmental Implications of Nanotechnology (CEINT). Dr. Lowry holds a B.S. in Chemical Engineering from the University of California at Davis, an M.S. in Civil and Environmental Engineering from University of Wisconsin at Madison, and a Ph.D. in Civil and Environmental Engineering from Stanford University. His research and teaching focuses on environmental chemistry and nanotechnology, organic and inorganic aqueous geochemistry, and subsurface processes affecting ground water quality. Dr. Lowry's professional interests include: aquatic chemistry; fate and transport of chemicals in surface and subsurface waters; soil and sediment treatment; groundwater remediation; carbon sequestration; and environmental issues related to fossil energy. Dr. Lowry has received awards for his research from the American Society of Civil Engineers (Walter L. Huber Civil Engineering Research Award), the Association of Environmental Engineering and Science Professors (Malcolm Pirnie/AEESP Frontiers in Research Award), and the American Chemical Society (Best Feature Article in ES&T for 2012). He has published over 80 scientific articles in leading environmental engineering and science journals; and 10 related book chapters. He is currently editing a book on nanoscale iron particles for groundwater remediation. Dr. Lowry's research has been supported by grants from both government agencies and private companies, with core grant research support primarily being from the federal government (National Science Foundation, U.S. Department of Defense, U.S. Department of Energy, and U.S. Environmental Protection Agency), with additional grant support from industry. Dr. Lowry serves on the National Research Council Committee to Develop a Research Strategy for Environmental Health and Safety Aspects of Engineered Nanomaterials. Prior to this, Dr. Lowry served as a Reviewer for NRC-NAS report on EHS research strategies for Nanotechnology, and was a Review Panelist for EPA's Draft Nanomaterial Research Strategy (NRS). He currently serves as a Science Advisory Board member for the Superfund Basic Research Center at Duke University, and two international research Centers, NANOEAU II and NANOREM.

## Nelson, Kara

### University of California, Berkeley

Dr. Kara Nelson is a Professor in Civil and Environmental Engineering at the University of California, Berkeley. She received her B.A. degree in biophysics from U.C. Berkeley, her M.S.E. degree in environmental engineering from the University of Washington, and her Ph.D. in environmental engineering from U.C. Davis. Her research program addresses critical issues at the intersection of public health and the environment, with a focus on reducing the threat posed by waterborne pathogens by improving our engineering infrastructure to make it more effective, affordable, as well as maximize its environmental benefits. Specific research areas include mechanisms of pathogen inactivation, molecular techniques for pathogen detection, optimizing drinking water and wastewater treatment processes, water reuse, and challenges with providing safe drinking water and sanitation in the developing world. Dr. Nelson has published over 45 articles in peer-reviewed journals, including three invited reviews, and one book chapter. She is the Director of Graduate Education at the National Science Foundation Engineering Research Center for Reinventing our Nation's Urban Water Infrastructure (ReNUWIt) and the faculty leader of the Research Thrust Area on Safe Water and Sanitation at the Berkeley Water Center. Dr. Nelson received the Presidential Early Career Award for Scientists and Engineers (PECASE) in 2004, and an Award of Merit from the Water Environment Federation Disinfection Committee in 2011. Dr. Nelson's research has been supported by grants from the National Science Foundation, the International Water Management Institute, the Bill and Melinda Gates Foundation, the Blum Center for Developing Economies (U.C. Berkeley), and the Sustainable Products and Solutions Program (U.C. Berkeley).

## Powell, Brian A.

### Clemson University

Dr. Brian A. Powell is an Assistant Professor in the Department of Environmental Engineering and Earth Sciences at Clemson University. He has expertise in the understanding and prediction of the physical, chemical, and biological processes which govern the mobility of radionuclides in natural and engineered systems through his research in the Department of Environmental Engineering and Earth Sciences at Clemson University as well as previous work at the Lawrence Livermore National Laboratory and the Lawrence Berkeley National Laboratory. He has a B.S. in Chemistry from the University of Montevallo, and M.S. and Ph.D. in Environmental Engineering and Science from Clemson University. He holds memberships in the American Chemical Society, American Geophysical Union, Geological Society of America, Association of Environmental Engineering and Science Professors, and Sigma Xi. At Clemson University, Dr. Powell teaches courses in Actinide Environmental Chemistry, Environmental Radiation Protection (Lecture and Laboratory courses), Introductory Health Physics, Geochemistry, and Geochemical Reaction Modeling. Dr. Powell served on the SAB/RAC Panel for the Uranium In-Situ ISL Advisory. His research focuses on biogeochemical processes controlling radionuclide behavior in the environment such as sorption by minerals, interactions with nano-colloids, complexation by organic ligands, and interactions with microorganisms. He has published over 20 refereed journal publications, thirteen research reports, and made over 50 technical presentations on these topical areas. He has conducted sponsored research in a wide range of projects dealing with topics of nuclear forensics, evaluation of nanoparticle behavior, sorption and environmental transport of plutonium, development of radiation detection and radiation laboratory courses, iodine, radium, strontium geochemistry in wetland and subsurface sediments, radionuclide geochemistry of saltstone and solid waste performance assessments at the Savannah River Site, measurement of thermodynamic parameters supporting advanced fuel cycle chemistry, and related topics. These research projects have garnered funding from the National Science Foundation, the Department of Energy, the Nuclear Regulatory Commission, the Department of Homeland Security, the National Nuclear Security Agency, and Savannah River Nuclear Services (through the South Carolina Universities Education and Research Foundation). Dr. Powell served on the SAB/RAC Panel for the Uranium In-Situ ISL Advisory.



**Reinhart, Debra****University of Central Florida**

Dr. Debra Reinhart is a Pegasus Professor and Assistant Vice President for Research and Commercialization at the University of Central Florida and a member of the Civil, Environmental and Construction Engineering Department. She holds a B.S. in Engineering from Florida Technological University, and an M.S. in Sanitary Engineering and a Ph.D. in Environmental Engineering from Georgia Institute of Technology. Dr. Reinhart's research area is solid waste management, with a focus on optimized waste collection and sustainable operation of landfills. Her research has been supported by grants from and contracts with both government agencies and private companies, with research support from the federal government (U.S. Environmental Protection Agency through subcontractor ARCADIS, and the National Science Foundation), core funding from the State of Florida (Hinkley Center for Solid and Hazardous Waste Management), and from the Environmental Research and Education Foundation. Dr. Reinhart is an Associate Editor for the Waste Management Journal, a member of the Managing Board of the International Waste Working Group, and a member of the Environmental Research and Education Foundation Board. In addition she is a member of the Accreditation Board for Engineering and Technology, Inc. (ABET) Engineering Accreditation Commission and served as an ABET program evaluator for the past eight years. Dr. Reinhart has received national recognition from National Aeronautics and Space Administration, the American Association of Environmental Engineers (AAEE), the Tech Museum of Innovation, Solid Waste Association of North America and others. She is a registered professional engineer in Florida and Georgia, a Board Certified Environmental Engineer, and Fellow of the American Society of Civil Engineers and the American Association for the Advancement of Science. Dr. Reinhart served from 2011-2013 as the Environmental Engineering Program Manager at the U.S. National Science Foundation in Washington DC. She has served on the American Society of Civil Engineer's Report Card for America's Infrastructure Committee for the last three report cards. Dr. Reinhart also served on the board of the AAEE from 2004-2010 and was president of the organization in 2009.

**Scherer, Michelle M.****University of Iowa**

Dr. Michelle M. Scherer is a Professor of Civil and Environmental Engineering at the University of Iowa. She holds a B.S. in Systems Engineering from the University of Virginia (1989), an M.S. in Civil and Environmental Engineering from the University of Connecticut (1994), and a Ph.D. (1998) in Environmental Science and Engineering from the Oregon Graduate Institute. Dr. Scherer is currently Chair of the Department of Civil & Environmental Engineering ([www.engineering.uiowa.edu/cee/](http://www.engineering.uiowa.edu/cee/)) and is an expert in environmental geochemistry and reactions of metals at the mineral –water interface. Her research and teaching interests are centered around the redox chemistry of minerals in soils and water, biogeochemical cycles of nutrients and metals, hazardous waste treatment, nanogeochemistry. Dr. Scherer is a past Associate Editor for the journal Environmental Science & Technology and was awarded the 2010 Malcolm Pirnie Frontier in Research Award by the Association of Environmental Engineering and Science Professors. She has published numerous articles in leading environmental engineering and science journals, as well as several book chapters. Dr. Scherer's current research and education initiatives are supported by competitive grants from the National Science Foundation, Department of Energy, and U.S. Department of Agriculture to provide funding to understand processes controlling heavy metal release and treatment and redox behavior of semiconductor minerals. Current work is focused on arsenic, uranium, and mercury heavy metals and iron, manganese, and clay minerals.

## VanBriesen, Jeanne

### Carnegie Mellon University

Dr. Jeanne VanBriesen is a Professor of Civil and Environmental Engineering at Carnegie Mellon University, and Director of the Carnegie Mellon Center for Water Quality in Urban Environmental Systems (WaterQUEST). She holds a B.S. in Education (Chemistry) from Northwestern University, and an M.S. and Ph.D. in Civil Engineering (Environmental) from Northwestern University. She is a registered professional engineer in Delaware. Her expertise is in water quality engineering, and in particular environmental biotechnology. Her research foci include biotransformation of recalcitrant organic compounds, detection of biological agents in drinking water and natural water systems, and speciation-driven biogeochemistry of chelating agents and disinfection by-products. Dr. VanBriesen's research has been funded through grants from the National Science Foundation, the Colcom Foundation, the Heinz Endowments, the Packard Foundation, and the Pennsylvania Infrastructure Technology Alliance. She has served on the boards of the Association for Environmental Engineering and Science Professors, the Ohio River Basin Consortia for Research and Education, and the Nine Mile Run Watershed Association. She is an associate editor for the ASCE Journal of Infrastructure Systems and is serving as a guest editor on a special issue of the ASCE Journal of Environmental Engineering. Dr. VanBriesen has received numerous awards, including the Pennsylvania Water Environment Association Professional Research Award in 2007 and the Best Research Paper in the Journal of Water Resources Planning and Management in 2008. Dr. VanBriesen served on the National Research Council's Committee on Water Quality in Southwestern Pennsylvania in 2002-2004. She was a selected presenter at the National Academy of Engineering Indo-US Frontiers of Engineering Symposium on Infrastructure in 2008, and an invited speaker at the National Academy of Engineering Education Symposium in 2010. She was selected as a National Academy of Engineering Gilbreth Lecturer in 2011.

## Walsh, Daniel

### State of New York Department of Environmental Conservation

Dr. Daniel Walsh is the Chief of the New York City Superfund and Brownfield Program for the New York State Department of Environmental Conservation (NYSDEC). He oversees a staff of over 20 scientists and engineers that actively manage over 1000 sites throughout New York City. He is New York City's coordinator for New York State's Brownfield Cleanup Program which couples remediation and new development by providing substantial development-based tax incentives for remedial projects at brownfield sites. Dr. Walsh formerly served as the Acting Chief of the New York City Solid Waste and RCRA Division for NYSDEC and oversaw programs for solid waste collection, transfer and disposal, solid waste recycling, composting and beneficial reuse, medical waste and RCRA transfer, storage and disposal. Following the September 11, 2001 attack on the World Trade Center, Dr. Walsh served as the Chief of Operations for New York State DEC's Civilian Response and oversaw a staff of over 50 people involved in management of spill and hazardous waste response, and oversight of debris handling and transport systems and natural resource systems. He served full time on that project for its 11-month duration. During the latter stages of the program he was responsible for the regulation of the debris handling and final disposal operations at the Fresh Kills Landfill. Dr. Walsh was also involved in New York State DEC's response to the Anthrax attack of Governor Pataki's Manhattan office in 2001. Dr. Walsh is an Adjunct Professor and Senior Research Scientist at Columbia University's Institute for Economic and Social Research and Policy. He teaches courses in environmental remediation, waste management and disaster response at Columbia University and Barnard College. He holds a B.S. from Binghamton University, an M.S. from the University of Massachusetts, and a Ph.D. in Geophysics and Contaminant Geochemistry from Rensselaer Polytechnic Institute, and is a geochemist and geophysicist with extensive experience in hydrogeology and contaminant transport and management. Dr. Walsh's recent work achievements include management of the environmental remediation and closure of the 3000-acre Fresh Kills Landfill, the world's largest landfill with an operating history spanning more than 50 years and 150 million metric tons of waste. Among the systems developed at the site during his management include the world's largest systems for landfill gas recovery and treatment system, landfill leachate containment, recovery and treatment, and landfill capping. Dr. Walsh's research interests involve the geochemistry and geomicrobiology of large urban terrestrial pollution enclaves and the forensic reconstruction of historical pollution patterns in heavily urbanized areas. His recent publications have reconstructed the history of solid waste incineration and landfill in New York City since 1800. Dr. Walsh has not received any external research grants from either government agencies or foundations.

**Werth, Charles J.**

**University of Illinois**

Dr. Charles J. Werth is a Professor and Associate Head of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign. He received a B.S. in Mechanical Engineering from Texas A&M University, an M.S. and Ph.D. in Environmental Engineering from Stanford University, and a Ph.D. minor in Chemistry from Stanford University. Dr. Werth's research focuses on the fate and transport of toxic chemicals in the environment, and the development of sustainable technologies for removing these chemicals from drinking water sources. In his research, he develops and/or uses noninvasive imaging, environmental microfluidics, nanotechnology, spectroscopic analysis, numerical modeling, and life cycle assessment. Dr. Werth's research has been supported by grants from both government agencies and private companies, with core research support primarily from the federal government (Environmental Protection Agency, Department of Energy, National Science Foundation, U.S. Geological Survey, U.S. Department of Agriculture, National Aeronautics and Space Administration, Sea Grant, U.S. Department of Education), and additional support from British Petroleum and King Abdullah University of Science and Technology. Dr. Werth is currently an Arthur and Virginia Nauman Faculty Scholar at the University of Illinois, and a Wiley Research Fellow at the Department of Energy's Environmental Molecular Science Laboratory, where he serves on the User Executive Committee. He served on the boards of the Association of Environmental Engineering and Science Professors (AEESP), and the AEESP Foundation. Past recognition includes an Editors Choice Best Paper Award from Environmental Science and Technology (2nd in the category of Technology), a most cited since 2008 in Journal of Contaminant Hydrology, a Humbolt Research Fellow Award, a National Science Foundation CAREER Award, and a BP Award for Innovation in Undergraduate Instruction.